

Note on West-African Species of Hemirhamphus.

By Dr. A. GÜNTHER.

I have just observed that I omitted, in my account of *Hemirhamphus*, to mention the West-African species described and figured by Dr. Bleeker in "Poissons de la Côte de Guinée," *Mém. Soc. Holl. Haarlem*, 1862.

1. The species described by him (p. 118, tab. 21. fig. 2) as *H. vittatus* (Val.), and identified with *Esox brasiliensis* (Brown), is most probably the Linnean *Esox brasiliensis* (see *Catal. Fish.* vi. p. 270), but distinct from *H. vittatus* (Val.).

2. *Hemirhamphus guineensis*, n. sp., Blkr. p. 119, tab. 25. fig. 2, is identical with *H. vittatus* (Val.), Günth. *Fish.* vi. p. 269.

3. *Hemirhamphus Schlegelii*, Blkr. p. 120, tab. 25. fig. 1, is a very distinct species, to which I have, unfortunately, given another name, viz. *H. calabaricus* (*Fish.* vi. p. 266).

On the Organs of Secretion in the Hemiptera.

By J. KÜNCKEL.

The most voluminous of the salivary glands are supported on the stomach, and occupy the whole upper part of the thoracic cavity, and extend into the abdomen. Each of them is divided into two parts by a constriction, and from this point the ejaculatory duct issues beneath. This duct divides at once into two branches, the largest of which runs almost directly to the head, passing beneath the œsophagus, where it approaches that of the opposite side. These ducts become fixed in a small cylindrical piece, of solid texture, and finally open by distinct orifices. The smaller branch descends into the abdomen, forming numerous sinuosities, and then ascends towards the head; on arriving in front of the œsophagus, being suddenly turned aside, it passes beneath a large coriaceous piece, which plays a great part in the movements of the parts of the mouth and in the acts of suction and deglutition.

The glands of the second pair, concealed beneath the principal glands, are formed each of a simple cœcal tube rolled upon itself and terminating at the outer angle of the coriaceous piece just mentioned.

The superior salivary apparatus contains a secreting membrane covered throughout with utricles of equal size. The anterior part, often inflated, looks as if it formed a reservoir for the hinder part, which is generally racemose; but this is not the case, as the histological constitution shows that the same functions are performed by both parts. The second salivary apparatus shows much analogy with the preceding in its structure, but its utricles are more scattered. The two glands of which it is formed are the seat of a special secretion, and not, as supposed by Léon Dufour, reservoirs for that of the superior glands. The salivary secretion, when introduced into plants, produced none of the effects ascribed to the attacks of Hemiptera.

The liquid is probably exclusively an agent in digestion ; it is alkaline, and renders reddened litmus-paper slightly blue.

The odorific apparatus, which has long been well known in the adult Pentatomites, is a sac situated at the base of the abdomen, and opening in the metathorax by two ostiola, at the level of the last pair of legs. In the larvæ and nymphæ this organ does not exist, and yet, like the perfect insects, they diffuse their peculiar odour. In the young individuals, from their hatching to the period of their last transformation, there are, in the upper part of the abdomen, below the skin, two glands presenting the same characters as the inferior gland of the adults. The presence of these organs is indicated upon the arches of the dorsal region by two shields ; and each of these shields presents two ostiola, through which the liquid is ejaculated.—*Comptes Rendus*, September 3, 1866, pp. 433-436.

Fossil Spider from the Coal-formation. By Dr. F. RÖEMER.

Dr. Röemer has described and figured, in the 'Jahrb. Min. of Leonhard & Geinitz,' 1866, p. 136, a very perfect specimen of a Spider from the Coal-formation of Upper Silesia. It is called the *Protolycosa anthracophila*, a name that implies a near relation in general habit to the modern *Lycosa*. The body is about an inch long. Appended to this paper is a notice of a specimen of *Arthropleura armata*, Jordan, from the Carboniferous beds of Zwickau, by Dr. Geinitz. The specimen is sufficient to show that the animal was a Crustacean ; it is evidently part of the carapace, and probably of a Decapod.—Silliman's *American Journal*, July 1866.

On the Course followed by a Fungous Mycelium in the living trunk of Acacia dealbata. By G. GASPARRINI.

The author examined the trunk of a fine plant of *Acacia dealbata* which, when in full flower in the Botanic Garden at Naples, was broken at the level of the soil by a slight gust of wind. The heart of the wood, from the collar for $2\frac{1}{2}$ decimetres upwards, was found to be rotten and blackish, whilst the alburnum and bark were in good condition. A microscopic examination showed in the altered part a brownish, ramose, articulated mycelium. This mycelium was traced up into the branches as far as about 5 metres above the soil. It did not attack the medullary rays, or the pith, or the spiral fibres surrounding it, or the fibrous cells, but only the dotted ducts.

M. Gasparrini inquires how this mycelium could have introduced itself into the trunk of the *Acacia*. He refers to the observations made by him upon the radicles of various Liliaceæ, several of which, having lost their spongioles, were open to foreign bodies of extreme tenuity.

He thinks that the extremely minute filaments of the mycelium occurring in the soil surrounding the *Acacia* might penetrate by the opening of the fibrous filament of the centre of these radicles into the interior of the bush, and thus ascend even to the summit of the trunk.—*Bibl. Univ.* 1866, *Bull. Sci.* p. 168.